

حمل الآن

مجاناً وحصرياً

# المراجعة رقم (1)

## اختبار شهر فبراير



### Lesson 1 Artificial Intelligence Applications

- » **Narrow AI:** It focuses on specific tasks, such as face recognition or language translation.
- » **General AI (GAI):** It can perform any human tasks, think, innovate, and adapt.
- » **Super AI (SAI):** It is the most advanced; it can solve complex problems and discover new things.

#### Key Points:

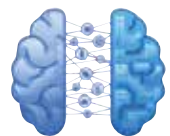
#### » Applications of AI in Daily Life:

- ① **Personal Assistant:** Like Siri or Alexa, they use AI to understand and perform commands.
- ② **Smart Games:** Video games use AI to make games fun and challenging.
- ③ **Smart Cars:** Self-driving cars are enabled by AI.
- ④ **Digital Doctors:** AI aids in faster and more accurate medical diagnosis.
- ⑤ **Instant Translator:** AI translates languages in real-time.
- ⑥ **Smart Shopping:** AI suggests products based on previous **purchases**.



#### » Fields of Artificial Intelligence:

- ① **Machine Learning:** AI learns from data and experiences.
- ② **Natural Language Processing (NLP):** AI understands, interprets, and speaks human language.
- ③ **Computer Vision:** AI analyzes and understands visual information.
- ④ **Robotics:** AI-powered robots perform various tasks.
- ⑤ **Expert Systems:** AI solves complex problems and make decisions.



⑥ **Deep Learning:** AI learns complex tasks using neural networks.

## » Creating Intelligent Models with Teachable Machine:

- **Teachable Machine:** It is a tool for creating models to recognize images, sounds, and movements.
- **Model Building Training:** Teaching AI by showing it examples is similar to teaching a child.

## Lesson 2 Sensors

### Definition:

» **Sensors:** They are devices that sense changes in the environment and convert them into signals for machines to understand and make decisions.

### Key Points:

#### » How Sensors Work:

- ① **Sensing:** They capture information (heat, light, and sound).
- ② **Signal Conversion:** They convert information into electrical signals.
- ③ **Transmission:** They send signals to display results or perform operations.

#### » Importance of Sensors for Robots:

- **Function:** Sensors act as the “senses” of robots, helping them see, hear, sense, and touch.

#### » Types of Robotic Sensors:

- ① **Distance Sensors:** They measure the distance to avoid collisions.
- ② **Light Sensors:** They adapt to changing light conditions.
- ③ **Sound Sensors:** They respond to voice commands.
- ④ **Motion Sensors:** They detect movement and direction changes.
- ⑤ **Special Sensors:** They measure temperature and humidity.

#### » Examples of Devices Using Sensors:

- ① **Vacuum Cleaner Robot:** It avoids obstacles.



② **Surgical Robot:** It uses precise sensors to perform surgeries.

③ **Self-Driving Cars:** They see the road and make decisions.

### » Types of Distance Sensors:

① **Ultrasonic Sensors:** They emit high-frequency sound waves to measure distance.

– **Examples:** Vacuum cleaner robots, parking systems, and fluid level measurement



② **Laser Rangefinders:** They emit laser beams for high accuracy.

– **Examples:** 3D laser scanners, ground scanning systems, and industrial measurement



③ **Visible Light Sensors:** They use digital cameras to analyze images.

– **Examples:** Self-driving car cameras, industrial vision systems, and augmented reality systems

④ **Infrared Sensors:** They emit infrared rays, then receive the returning rays.

» They are widely used in consumer electronics.

– **Examples:** Remote controls, and non-contact thermometers



⑤ **Time of Flight Sensors:** They measure the light pulse travel time.

– **Examples:** 3D sensors, and motion tracking systems

### » Factors for Choosing Sensors:

① **Required Range:** The maximum distance to measure

② **Required Accuracy:** The measurement precision needed

③ **Operating Environment:** Conditions like lighting, temperature, and humidity

④ **Cost:** Device and installation expenses

## »» Daily Applications of Sensors:

- 1 **Smartphones:** Taking pictures, adjusting lighting, determining locations
- 2 **Modern Cars:** Measuring speed, warning of collisions, assisting in parking
- 3 **Smart Homes:** Motion sensors for automatic lighting
- 4 **Phone Microphone:** Converting sound to electrical signals
- 5 **Motion Sensors in Games:** Detecting phone tilts
- 6 **Touch Screen:** Sensing finger touches

## Lesson 3 Robots

### Definition:

- »» **Robot:** It is a device programmed to automatically perform specific tasks, capable of moving, sensing, and interacting with its surroundings.

### Key Points:

#### »» Types of Robots:

- 1 **Industrial Robots:** They are used in factories for precise tasks, e.g., car production.
- 2 **Home Robots:** They are found in homes, e.g., Roomba for cleaning floors.
- 3 **Medical Robots:** They assist in surgeries with high accuracy.
- 4 **Educational Robots:** They are used in schools to teach programming, e.g., LEGO Mindstorms.



#### »» Robot Components:

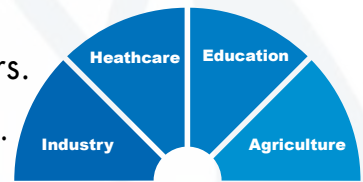
- 1 **Structure:** It is the main part carrying all components, made of materials like metal, plastic, or carbon.
- 2 **Sensors:** They are the senses of the robot, e.g., sound sensors and cameras.
- 3 **Motors:** They move parts of a robot, so it can move and execute commands, e.g., electric motors and pneumatic motors.



- ④ **Controller:** It is the “brain” of the robot, processes data and issues commands.
- ⑤ **Power Source:** It can be batteries, solar cells, or direct electrical power source.
- ⑥ **Software:** It makes the robot “smart,” includes algorithms for responses.
- ⑦ **Communication Tools:** They interact with users or other robots, e.g., Bluetooth and Wi-Fi.

### » Areas of Use of Robots:

- ① **Industry:** They improve productivity, reducing errors.
- ② **Healthcare:** They assist in surgeries and patient care.
- ③ **Education:** They provide interactive learning.
- ④ **Agriculture:** They are used in precision farming to increase crops and reduce waste.



### » Challenges of Using Robots:

- ① **Safety:** The need to ensure the safety of robots during work.
- ② **Employment:** Concerns that they can replace human labor.
- ③ **Ethics:** Impact on society.

### » Benefits of Using Robots:

- ① **Increased Efficiency and Productivity:** They can do continuous work without fatigue or interruption.
- ② **High Accuracy and Reduced Errors:** They are precise in tasks, like surgeries and electronics assembly.
- ③ **Safety and Security:** They can perform dangerous tasks and handle heavy weights and hazardous materials.
- ④ **Adaptability and Diversity:** They perform various tasks efficiently, e.g., home robots and educational robots.
- ⑤ **Reduced Costs:** They provide long-term cost savings by reducing human labor or errors, and achieving accuracy.
- ⑥ **Contributing to Development:** They encourage technological advancements, e.g., space exploration and medical research.

## Lesson 4 Scratch

### Definition:

- » **Scratch Program:** It is a visual and easy-to-use educational tool for learning programming through games, animations, music, and more.



### Key Points:

#### » Scratch Program Features:

- 1 **Simple Interface:** It uses and orders visual blocks to form programs.
- 2 **Educational:** It is designed to teach basic programming concepts in a fun way.
- 3 **Free:** It is available for download from its official website for free.
- 4 **Creative Thinking:** It develops skills in creative thinking and problem-solving.
- 5 **Problem-solving Skills:** It solves problems in a logical way.
- 6 **Collaboration:** It enhances teamwork skills.
- 7 **Foundation:** It provides a strong start for learning more complex programming languages.
- 8 **Sharing:** Its projects can be shared with others.



#### » Program Interface:

- **Menu Bar**
- **Command Blocks Area**
- **Script Area:** It collects programming sections.
- **Stage Area:** It shows project results.
- **Sprite Object**
- **Sprites Area:** It contains the project's objects.

**»» Coordinates:**

- **Determine Coordinates:** X=..... (horizontal), Y=..... (vertical)
- **Change Coordinates:** Drag and drop the sprite to a new position.

**»» Implement the project:**

- To execute the project, click on the icon .
- To stop the execution of the project, click on the icon .

**»» Saving the Project:**

- File Menu: Choose "Save to your computer".
- The file extension is **Sb3**.







### Model Exam

1

#### 1 Choose the correct answer:

- 1 ..... , like Siri or Alexa, uses artificial intelligence to understand and execute your commands.
  - a. Personal assistant
  - b. Instant translator
  - c. Smart shopping
  - d. Natural language
- 2 One of the common applications of sensors is the use of infrared in .....
  - a. smartphones
  - b. remote controls
  - c. vacuum cleaners
  - d. 3D scanning
- 3 Robots assist in dangerous tasks, such as .....
  - a. transportation and communication means
  - b. handling heavy weights and hazardous chemicals
  - c. irrigating gardens and parks
  - d. cleaning the house
- 4 The main function of the sensor is to .....
  - a. store data
  - b. capture environmental changes and convert them into signals
  - c. display images
  - d. produce sound
- 5 The challenges facing robotics technology include .....
  - a. an increased reliance on paper documents
  - b. an increased reliance on smartphones
  - c. safety, employment, and ethics
  - d. an increased reliance on traditional machines



- 6 The factors that determine the choice of a sensor for a particular application include the ..... .
- a. brand of the device
  - b. color of the device
  - c. environment and required accuracy
  - d. size of the device
- 7 To execute the project, click on the icon ..... .
- a. 
  - b. 
  - c. 
  - d. 

## 2 Put (✓) or (X):

- 1 Medical robots help doctors perform surgeries. ( )
- 2 Visible light sensors help cars determine the distance to other vehicles. ( )
- 3 Artificial intelligence is used only in the video game industry. ( )
- 4 Laser rangefinders are accurate because they use laser beams. ( )
- 5 The control unit processes the data collected by the sensors and issues commands to the motors. ( )
- 6 Narrow artificial intelligence can perform any task that a human can perform. ( )
- 7 Artificial intelligence can assist doctors in diagnosing diseases. ( )
- 8 The Scratch program helps the student learn the principles of programming. ( )

# Model Exam

## 2

### 1 Choose the correct answer:

- 1 ..... artificial intelligence can solve problems that are difficult for humans to solve easily and discover new things we never imagined before.
  - a. Narrow
  - b. General
  - c. Super
  - d. Precise
- 2 Sensors help robots to .....
  - a. teach them new languages
  - b. allow them to interact with their environment
  - c. increase their size
  - d. slow down their operations
- 3 In production lines, robots can perform repetitive tasks accurately and without any delay, which leads to .....
  - a. an increased efficiency and productivity
  - b. a decreased efficiency and productivity
  - c. a lack of product development
  - d. a slow production process
- 4 ..... are used for non-contact temperature measurement.
  - a. Ultrasonic sensors
  - b. Infrared sensors
  - c. Light sensors
  - d. Motion sensors
- 5 ..... are used to avoid obstacles.
  - a. Light sensors
  - b. Sound sensors
  - c. Distance sensors
  - d. Heat sensors
- 6 To take pictures and videos, we use ..... sensors.
  - a. sound
  - b. touch
  - c. light
  - d. motion
- 7 In the Scratch program, the result of the work or project appears in the .....
  - a. script area
  - b. stage area
  - c. area blocks
  - d. sprites area

## 2 Put (✓) or (X):

- 1 Robots do not need to use software to operate. ( )
- 2 An ultrasonic sensor is used for non-contact temperature measurement. ( )
- 3 Artificial intelligence is one type only. ( )
- 4 Vision sensors are used to capture sounds. ( )
- 5 Self-driving cars use sensors to assist in driving. ( )
- 6 Scratch program is considered a difficult educational tool to use. ( )
- 7 General artificial intelligence focuses on performing a specific task. ( )
- 8 Scratch uses a visual interface based on blocks. ( )

## Model Exam

### 3

## 1 Choose the correct answer:

- 1 The first step in the operation of the sensor is ..... .  
 a. transmitting      b. displaying      c. sensing      d. transduction
- 2 ..... is an example of a home robot.  
 a. An industrial robot      b. A medical robot  
 c. Roomba      d. An educational robot
- 3 ..... is a type of AI that focuses on performing specific tasks.  
 a. Narrow AI      b. General AI      c. Super AI      d. None of them
- 4 ..... is the practical use of motion sensors in games.  
 a. Changing the volume      b. Adjusting the brightness of the screen  
 c. Tracking the movements of players      d. Improving the sound quality
- 5 The main part that carries all components of a robot is the ..... .  
 a. sensor      b. motor      c. structure      d. controller
- 6 ..... sensors are used to turn on lights when someone enters the room.  
 a. Smartphone      b. Smart car  
 c. Smart home lighting system      d. Smart watch

- 7 Scratch uses ..... to create programs.
- |                  |                  |
|------------------|------------------|
| a. command lines | b. visual blocks |
| c. text          | d. audio files   |

## 2 Put (✓) or (X):

- 1 The motors used in robots include electric motors and pneumatic motors. (     )
- 2 The home's smart lighting system uses sensors to automatically turn on the lights when someone enters the room. (     )
- 3 Artificial intelligence is a branch of computer science. (     )
- 4 Robots do not need to use software in their work. (     )
- 5 Sensors are devices that sense changes in the environment and convert them into signals. (     )
- 6 Narrow AI can perform any task that a human can perform. (     )
- 7 Smart games are used to make playing games more fun. (     )
- 8 In the Scratch program, the stage area displays the code blocks. (     )

## Model Exam

4

## 1 Choose the correct answer:

- 1 Laser rangefinders are accurate because they use ..... .

a. sound waves	b. visible light
c. high-frequency waves	d. laser beams

- 2 The ..... is considered the "brain" of the robot.

a. sensor	b. motor	c. structure	d. controller
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- 3 ..... is a field of AI that involves learning from mistakes.

a. Machine Learning	b. Natural Language Processing
c. Computer Vision	d. Robotics

- 4 ..... is the main purpose of the signal conversion step in sensors.

a. Displaying the results	b. Sending the signals to another device
c. Converting the information into electrical signals	d. Turning off the sensor





- 2** Put (✓) or (x):

- # Model Exam

5

**1 Choose the correct answer:**

- 14

- 2 A power source for robots is the ..... .  
 a. sensors                      b. motors                      c. batteries                      d. software
- 3 ..... is a field of AI that enables computers to interpret visual information.  
 a. Robotics    b. Computer Vision  
 c. Deep Learning                                      d. Natural Language Processing
- 4 What step comes after Signal Conversion in the operation of sensors?  
 a. Sensing    b. Transmission  
 c. Data Processing                                      d. Displaying Results
- 5 Robots use ..... to interact with users or other robots.  
 a. sensors    b. communication tools  
 c. motors    d. a power source
- 6 Deep learning mainly relies on ..... .  
 a. neural networks                                      b. databases  
 c. robotics    d. language models
- 7 Which of these factors is NOT important when choosing the appropriate type of sensor?  
 a. Required range                                      b. Required accuracy  
 c. Operating environment                              d. Brand popularity

## 2 Put (✓) or (X):

- 1 The design of the structure affects the weight of the robot and its ability to move. (      )
- 2 The first step in the operation of the sensor device is signal conversion. (      )
- 3 Artificial intelligence can learn new things slowly. (      )
- 4 The areas of use of robots include industry, healthcare, and education. (      )
- 5 Sensors are considered the eyes and ears of machines. (      )
- 6 Sensors are not used in smartphones. (      )
- 7 Super artificial intelligence focuses on solving specific problems. (      )
- 8 In the Scratch program, the student needs to write a lot of complex codes. (      )

# Answers

## Model Exam 1

- 1 1 a 2 b 3 b 4 b  
5 c 6 c 7 a
- 
- 2 1 (✓) 2 (✓) 3 (X) 4 (✓)  
5 (✓) 6 (X) 7 (✓) 8 (✓)

## Model Exam 2

- 1 1 c 2 b 3 a 4 b  
5 c 6 c 7 b
- 
- 2 1 (X) 2 (X) 3 (X) 4 (X)  
5 (✓) 6 (X) 7 (X) 8 (✓)

## Model Exam 3

- 1 1 c 2 c 3 a 4 c  
5 c 6 c 7 b
- 
- 2 1 (✓) 2 (✓) 3 (✓) 4 (X)  
5 (✓) 6 (X) 7 (✓) 8 (X)

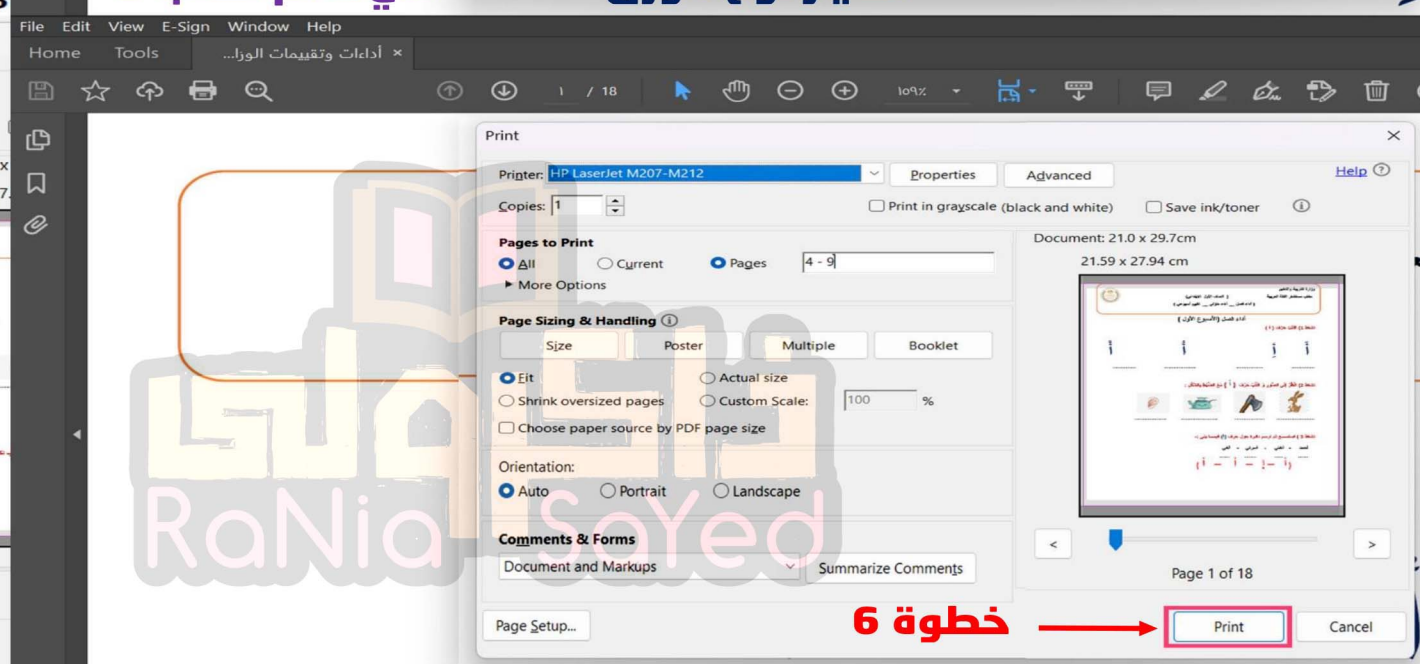
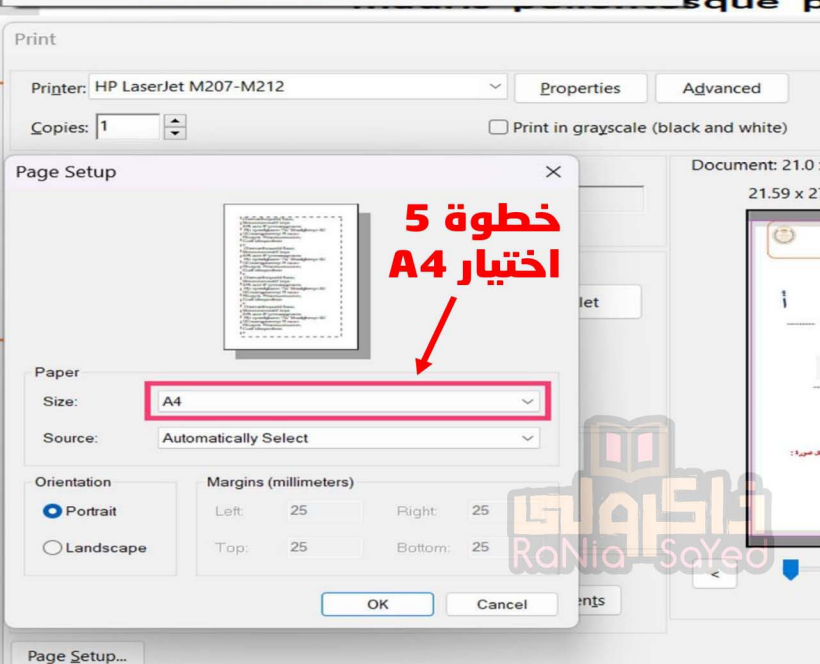
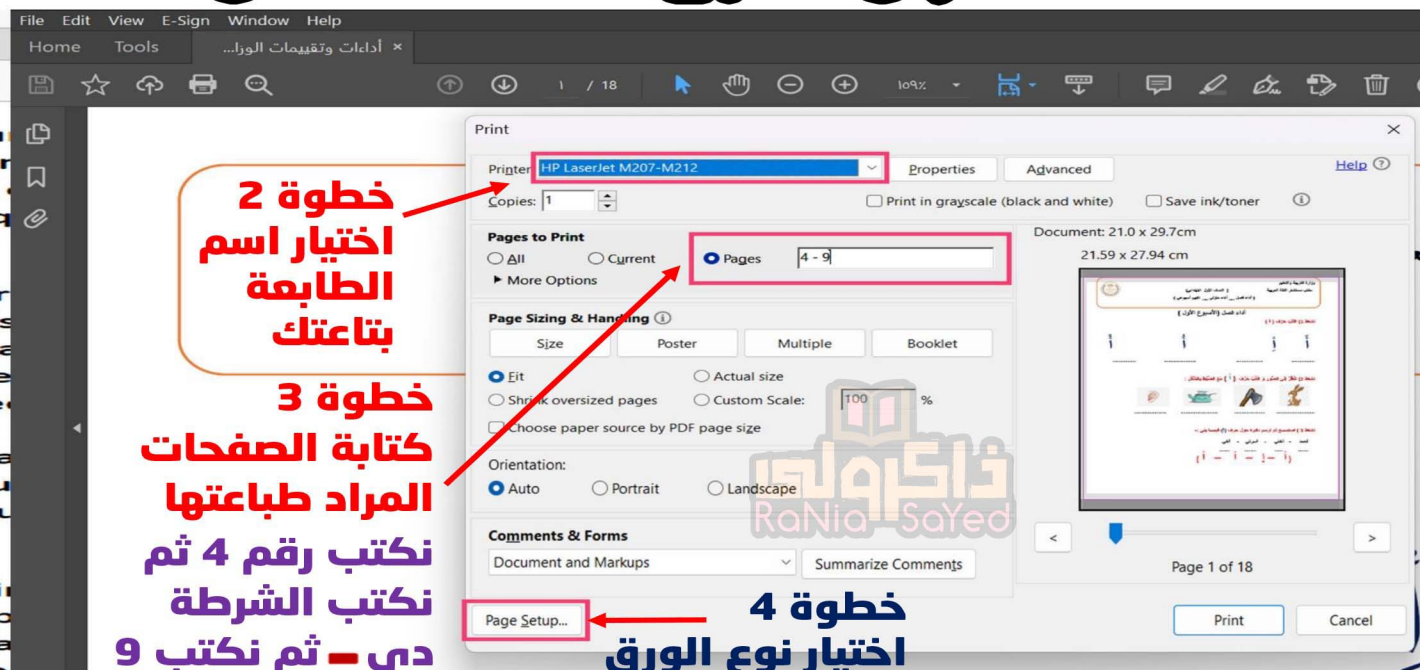
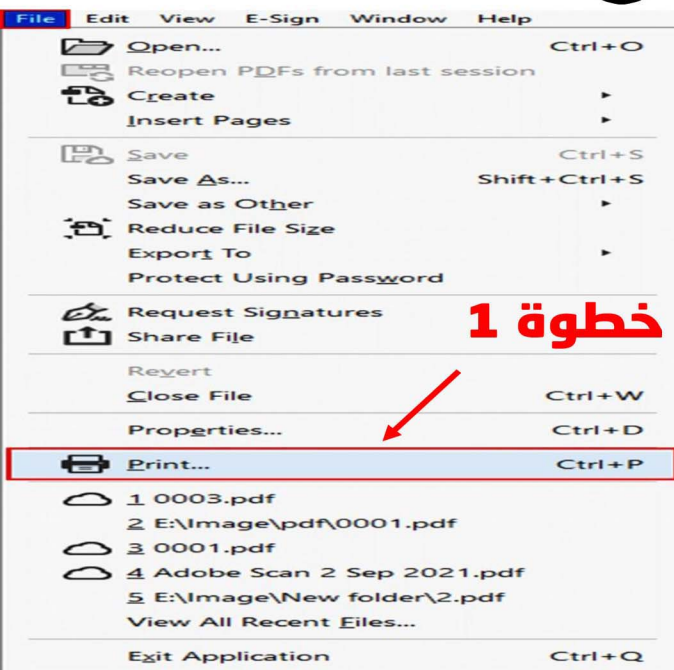
## Model Exam 4

- 1 1 d 2 d 3 a 4 c  
5 d 6 a 7 b
- 
- 2 1 (X) 2 (X) 3 (X) 4 (✓)  
5 (X) 6 (X) 7 (✓) 8 (X)

## Model Exam 5

- 1 1 b 2 c 3 b 4 b  
5 b 6 a 7 d
- 
- 2 1 (✓) 2 (X) 3 (X) 4 (✓)  
5 (✓) 6 (X) 7 (X) 8 (X)

# كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9





حمل الآن

مجانا وحصريا

# المراجعة رقم (2)

## اختبار شهر فبراير







## February questions bank

### Question 01 Choose the correct answers

1. Scratch can be used to create ..... .
  - a. games
  - b. animations
  - c. simulations
  - d. all of them
2. In which environment are light sensors useful?
  - a. In dark rooms
  - b. In places with variable lighting conditions
  - c. In underwater environments
  - d. In noisy factories
3. Deep learning mainly relies on ..... .
  - a. neural networks
  - b. databases
  - c. robotics
  - d. language models
4. Sensors help robots to ..... .
  - a. teach them new languages
  - b. allow them to interact with their environment
  - c. increase their size
  - d. slow down their operations
5. In production lines, robots can perform repetitive tasks accurately and without any delay, which leads to ..... .
  - a. increased efficiency and productivity
  - b. decreased efficiency and productivity
  - c. lack of product development
  - d. slow production process
6. .... is the main purpose of the signal conversion step in sensors.
  - a. Displaying the results





- b. Sending the signals to another device
- c. Converting the information into electrical signals
- d. Turning off the sensor

7. An example of educational robots is .....

- a. Roomba
- b. LEGO Mindstorms
- c. Zoomba
- d. all of them

8. ...., like Siri or Alexa, uses artificial intelligence to understand and execute your commands.

- a. Personal assistant
- b. Instant translator
- c. Smart shopping
- d. Natural language

9. .... is the practical use of motion sensors in games.

- a. Changing the volume
- b. Adjusting the brightness of the screen
- c. Tracking the movements of players
- d. Improving the sound quality

10. .... is a field of AI that enables computers to interpret visual information.

- a. Robotics
- b. Computer Vision
- c. Deep Learning
- d. Natural Language Processing

11. .... is an example of a home robot.

- a. An industrial robot
- b. A medical robot
- c. Roomba
- d. An educational robot

12. The factors that determine the choice of a sensor for a particular application include the .....

- a. brand of the device
- b. color of the device





- c. environment and required accuracy
- d. size of the device

13. In the Scratch program, the result of the work or project appears in the .....

- a. script area
- b. stage area
- c. area blocks
- d. sprites area

14. The challenges facing robotics technology include .....

- a. an increased reliance on paper documents
- b. an increased reliance on smartphones
- c. safety, employment, and ethics
- d. an increased reliance on traditional machines

15. Scratch uses ..... to create programs.

- a. command lines
- b. visual blocks
- c. text
- d. audio files

16. .... are used to avoid obstacles.

- a. Light sensors
- b. Sound sensors
- c. Distance sensors
- d. Heat sensors

17. .... is a type of AI that focuses on performing specific tasks.

- a. Narrow AI
- b. General AI
- c. Super AI
- d. None of them

18. Laser rangefinders are accurate because they use .....

- a. sound waves
- b. visible light
- c. high-frequency waves
- d. laser beams





19. To take pictures and videos, we use ..... sensors.

- a. sound
- b. touch
- c. light
- d. motion

20. .... artificial intelligence can solve problems that are difficult for humans to solve easily and discover new things we never imagined before.

- a. Narrow
- b. General
- c. Super
- d. Precise

21. The first step in the operation of the sensor is .....

- a. transmitting
- b. displaying
- c. sensing
- d. transduction

22. One of the common applications of sensors is the use of infrared in .....

- a. smartphones
- b. remote controls
- c. vacuum cleaners
- d. 3D scanning

23. The main function of the sensor is to .....

- a. store data
- b. capture environmental changes and convert them into signals
- c. display images
- d. produce sound

24. .... sensors are used to turn on lights when someone enters the room.

- a. Smartphone
- b. Smart car
- c. Smart home lighting system
- d. Smart watch

25. .... are used for non-contact temperature measurement.

- a. Ultrasonic sensors
- b. Infrared sensors





- c. Light sensors
- d. Motion sensors

**26.** Robots use ..... to interact with users or other robots.

- a. sensors
- b. communication tools
- c. motors
- d. a power source

**27.** Which of these factors is NOT important when choosing the appropriate type of sensor?

- a. Required range
- b. Required accuracy
- c. Operating environment
- d. Brand popularity

**28.** The main part that carries all components of a robot is the .....

- a. sensor
- b. motor
- c. structure
- d. controller

**29.** Robots assist in dangerous tasks, such as .....

- a. transportation and communication means
- b. handling heavy weights and hazardous chemicals
- c. irrigating gardens and parks
- d. cleaning the house

**30.** The sensors that are used to measure distance using high-frequency sound waves are .....

- a. ultrasonic sensors
- b. laser rangefinders
- c. infrared sensors
- d. motion sensors

**31.** A power source for robots is the .....

- a. sensors
- b. motors
- c. batteries





d. software

32. The ..... is considered the "brain" of the robot.

- a. sensor
- b. motor
- c. structure
- d. controller

33. .... is a field of AI that involves learning from mistakes.

- a. Machine Learning
- b. Natural Language Processing
- c. Computer Vision
- d. Robotics

34. What step comes after Signal Conversion in the operation of sensors?

- a. Sensing
- b. Transmission
- c. Data Processing
- d. Displaying Results

35. .... is the main goal of the Scratch program.

- a. Designing websites
- b. Teaching the basics of programming in a visual and fun way
- c. Creating complex programs for professional programmers
- d. Developing cell phone applications

36. .... is one of the advantages of the Scratch program.

- a. Complex interface
- b. Requires complex coding
- c. Free and available for download
- d. Focuses only on advanced programming

37. .... is the primary function of blocks in Scratch.

- a. File management
- b. Organizing code
- c. Playing acoustics
- d. Controlling program settings

38. The Scratch program can be downloaded from .....

- a. Paid App Store
- b. The official website of the program
- c. Email
- d. A CD-ROM





39. .... is an area used to assemble building blocks in Scratch.

- a. Stage Area
- b. Script Area
- c. Menu Bar
- d. Sprites Area

40. The purpose of using the "wait" command in Scratch is .....

- a. Automatically launch the project
- b. Stopping the project
- c. Control the execution time of commands
- d. Change the interface language

## Question02 Put mark (✓) or mark (×):

1. Ultrasonic sensors emit light waves to measure distance. ( )
2. Super artificial intelligence focuses on solving specific problems. ( )
3. Narrow artificial intelligence can perform any task that a human can perform. ( )
4. The design of the structure affects the weight of the robot and its ability to move. ( )
5. Medical robots help doctors perform surgeries. ( )
6. General artificial intelligence focuses on performing a specific task. ( )
7. Laser rangefinders are accurate because they use laser beams. ( )
8. The Scratch program helps the student learn the principles of programming. ( )
9. In the Scratch program, the student needs to write a lot of complex codes. ( )
10. Smart shopping gives you suggestions for products you might like. ( )
11. Artificial intelligence is one type only. ( )
12. Robots do not need to use software in their work. ( )
13. Self-driving cars use sensors to assist in driving. ( )
14. Artificial intelligence is used only in the video game industry. ( )
15. In the Scratch program, the stage area displays the code blocks. ( )
16. The first step in the operation of the sensor device is signal conversion. ( )
17. Scratch uses a visual interface based on blocks. ( )
18. Scratch program is considered a difficult educational tool to use. ( )
19. Light sensors are useful in underwater environments. ( )
20. Robots rely on direct energy sources only and we cannot use batteries or solar cells. ( )
21. The areas of use of robots include industry, healthcare, and education. ( )
22. An ultrasonic sensor is used for non-contact temperature measurement. ( )
23. Sensors are considered the eyes and ears of machines. ( )
24. The robots' work is limited to factories only. ( )





25. The home's smart lighting system uses sensors to automatically turn on the lights when someone enters the room. ( )
26. Visible light sensors help cars determine the distance to other vehicles. ( )
27. Artificial intelligence can learn new things slowly. ( )
28. Artificial intelligence is a branch of computer science. ( )
29. Scratch is a paid program. ( )
30. Smart games are used to make playing games more fun. ( )
31. Robots do not need to use software to operate. ( )
32. Vision sensors are used to capture sounds. ( )
33. Narrow AI can perform any task that a human can perform. ( )
34. Artificial intelligence can assist doctors in diagnosing diseases. ( )
35. The motors used in robots include electric motors and pneumatic motors. ( )
36. Sensors are devices that sense changes in the environment and convert them into signals. ( )
37. Sensors are not used in smartphones. ( )
38. Self-driving cars rely entirely on artificial intelligence. ( )
39. Robots use communication tools to interact with users or other robots. ( )
40. The control unit processes the data collected by the sensors and issues commands to the motors. ( )
41. The "wait" command is used to change the speed of command execution in Scratch. ( )
42. Sprites in the Scratch program appear in the Stage Area. ( )
43. X coordinates represent the horizontal movement of the object on the stage. ( )
44. The default file format for Scratch projects is "exe". ( )
45. The interface language of the Scratch program can be changed to Arabic. ( )
46. Scratch helps develop creative thinking and problem-solving skills. ( )
47. The Stage Area is used to assemble building blocks. ( )
48. The "wait" command is used to change the speed of command execution in Scratch. ( )
49. Sprites in the Scratch program appear in the Stage Area. ( )
50. X coordinates represent the horizontal movement of the object on the stage. ( )

End of the Quiz – 🎉





## THE ANSWERS

### Question 01 Choose the correct answers

1. Scratch can be used to create ..... .
  - a. games
  - b. animations
  - c. simulations
  - d. all of them
2. In which environment are light sensors useful?
  - a. In dark rooms
  - b. In places with variable lighting conditions
  - c. In underwater environments
  - d. In noisy factories
3. Deep learning mainly relies on ..... .
  - a. neural networks
  - b. databases
  - c. robotics
  - d. language models
4. Sensors help robots to ..... .
  - a. teach them new languages
  - b. allow them to interact with their environment
  - c. increase their size
  - d. slow down their operations
5. In production lines, robots can perform repetitive tasks accurately and without any delay, which leads to ..... .
  - a. increased efficiency and productivity





- b. decreased efficiency and productivity
- c. lack of product development
- d. slow production process

6. .... is the main purpose of the signal conversion step in sensors.

- a. Displaying the results
- b. Sending the signals to another device
- c. Converting the information into electrical signals
- d. Turning off the sensor

7. An example of educational robots is .....

- a. Roomba
- b. LEGO Mindstorms
- c. Zoomba
- d. all of them

8. ...., like Siri or Alexa, uses artificial intelligence to understand and execute your commands.

- a. Personal assistant
- b. Instant translator
- c. Smart shopping
- d. Natural language

9. .... is the practical use of motion sensors in games.

- a. Changing the volume
- b. Adjusting the brightness of the screen
- c. Tracking the movements of players
- d. Improving the sound quality

10. .... is a field of AI that enables computers to interpret visual information.

- a. Robotics
- b. Computer Vision
- c. Deep Learning
- d. Natural Language Processing

11. .... is an example of a home robot.

- a. An industrial robot
- b. A medical robot
- c. Roomba





d. An educational robot

12. The factors that determine the choice of a sensor for a particular application include the .....

- a. brand of the device
- b. color of the device
- c. environment and required accuracy
- d. size of the device

13. In the Scratch program, the result of the work or project appears in the .....

- a. script area
- b. stage area
- c. area blocks
- d. sprites area

14. The challenges facing robotics technology include .....

- a. an increased reliance on paper documents
- b. an increased reliance on smartphones
- c. safety, employment, and ethics
- d. an increased reliance on traditional machines

15. Scratch uses ..... to create programs.

- a. command lines
- b. visual blocks
- c. text
- d. audio files

16. .... are used to avoid obstacles.

- a. Light sensors
- b. Sound sensors
- c. Distance sensors
- d. Heat sensors

17. .... is a type of AI that focuses on performing specific tasks.

- a. Narrow AI
- b. General AI
- c. Super AI
- d. None of them





18. Laser rangefinders are accurate because they use .....

- a. sound waves
- b. visible light
- c. high-frequency waves
- d. laser beams

19. To take pictures and videos, we use ..... sensors.

- a. sound
- b. touch
- c. light
- d. motion

20. .... artificial intelligence can solve problems that are difficult for humans to solve easily and discover new things we never imagined before.

- a. Narrow
- b. General
- c. Super
- d. Precise

21. The first step in the operation of the sensor is .....

- a. transmitting
- b. displaying
- c. sensing
- d. transduction

22. One of the common applications of sensors is the use of infrared in .....

- a. smartphones
- b. remote controls
- c. vacuum cleaners
- d. 3D scanning

23. The main function of the sensor is to .....

- a. store data
- b. capture environmental changes and convert them into signals
- c. display images
- d. produce sound

24. .... sensors are used to turn on lights when someone enters the room.

- a. Smartphone
- b. Smart car





**c. Smart home lighting system**

d. Smart watch

25. .... are used for non-contact temperature measurement.

a. Ultrasonic sensors

**b. Infrared sensors**

c. Light sensors

d. Motion sensors

26. Robots use ..... to interact with users or other robots.

a. sensors

**b. communication tools**

c. motors

d. a power source

27. Which of these factors is NOT important when choosing the appropriate type of sensor?

a. Required range

b. Required accuracy

c. Operating environment

**d. Brand popularity**

28. The main part that carries all components of a robot is the .....

a. sensor

b. motor

**c. structure**

d. controller

29. Robots assist in dangerous tasks, such as .....

a. transportation and communication means

**b. handling heavy weights and hazardous chemicals**

c. irrigating gardens and parks

d. cleaning the house

30. The sensors that are used to measure distance using high-frequency sound waves are .....

**a. ultrasonic sensors**

b. laser rangefinders

c. infrared sensors





d. motion sensors

31. A power source for robots is the .....

- a. sensors
- b. motors
- c. batteries**
- d. software

32. The ..... is considered the "brain" of the robot.

- a. sensor
- b. motor
- c. structure
- d. controller**

33. .... is a field of AI that involves learning from mistakes.

- a. Machine Learning**
- b. Natural Language Processing
- c. Computer Vision
- d. Robotics

34. What step comes after Signal Conversion in the operation of sensors?

- a. Sensing
- b. Transmission
- c. Data Processing**
- d. Displaying Results

35. .... is the main goal of the Scratch program.

- a. Designing websites
- b. Teaching the basics of programming in a visual and fun way**
- c. Creating complex programs for professional programmers
- d. Developing cell phone applications

36. .... is one of the advantages of the Scratch program.

- a. Complex interface
- b. Requires complex coding
- c. Free and available for download**
- d. Focuses only on advanced programming

37. .... is the primary function of blocks in Scratch.

- a. File management
- b. Organizing code**
- c. Playing acoustics
- d. Controlling program settings





38. The Scratch program can be downloaded from .....
- a. Paid App Store
  - b. The official website of the program**
  - c. Email
  - d. A CD-ROM
39. .... is an area used to assemble building blocks in Scratch.
- a. Stage Area
  - b. Script Area**
  - c. Menu Bar
  - d. Sprites Area
40. The purpose of using the "wait" command in Scratch is .....
- a. Automatically launch the project
  - b. Stopping the project
  - c. Control the execution time of commands**
  - d. Change the interface language

## Question02

Put mark (✓) or mark (×):

1. Ultrasonic sensors emit light waves to measure distance. (×)
2. Super artificial intelligence focuses on solving specific problems. (×)
3. Narrow artificial intelligence can perform any task that a human can perform. (×)
4. The design of the structure affects the weight of the robot and its ability to move. (✓)
5. Medical robots help doctors perform surgeries. (✓)
6. General artificial intelligence focuses on performing a specific task. (×)
7. Laser rangefinders are accurate because they use laser beams. (✓)
8. The Scratch program helps the student learn the principles of programming. (✓)
9. In the Scratch program, the student needs to write a lot of complex codes. (×)
10. Smart shopping gives you suggestions for products you might like. (✓)
11. Artificial intelligence is one type only. (×)
12. Robots do not need to use software in their work. (×)
13. Self-driving cars use sensors to assist in driving. (✓)
14. Artificial intelligence is used only in the video game industry. (×)
15. In the Scratch program, the stage area displays the code blocks. (×)
16. The first step in the operation of the sensor device is signal conversion. (×)





17. Scratch uses a visual interface based on blocks. (✓)
18. Scratch program is considered a difficult educational tool to use. (x)
19. Light sensors are useful in underwater environments. (x)
20. Robots rely on direct energy sources only and we cannot use batteries or solar cells. (x)
21. The areas of use of robots include industry, healthcare, and education. (✓)
22. An ultrasonic sensor is used for non-contact temperature measurement. (x)
23. Sensors are considered the eyes and ears of machines. (✓)
24. The robots' work is limited to factories only. (x)
25. The home's smart lighting system uses sensors to automatically turn on the lights when someone enters the room. (✓)
26. Visible light sensors help cars determine the distance to other vehicles. (x)
27. Artificial intelligence can learn new things slowly. (x)
28. Artificial intelligence is a branch of computer science. (✓)
29. Scratch is a paid program. (x)
30. Smart games are used to make playing games more fun. (✓)
31. Robots do not need to use software to operate. (x)
32. Vision sensors are used to capture sounds. (x)
33. Narrow AI can perform any task that a human can perform. (x)
34. Artificial intelligence can assist doctors in diagnosing diseases. (✓)
35. The motors used in robots include electric motors and pneumatic motors. (✓)
36. Sensors are devices that sense changes in the environment and convert them into signals. (✓)
37. Sensors are not used in smartphones. (x)
38. Self-driving cars rely entirely on artificial intelligence. (x)
39. Robots use communication tools to interact with users or other robots. (✓)
40. The control unit processes the data collected by the sensors and issues commands to the motors. (✓)
41. The "wait" command is used to change the speed of command execution in Scratch. (✓)
42. Sprites in the Scratch program appear in the Stage Area. (✓)
43. X coordinates represent the horizontal movement of the object on the stage. (✓)





- 44. The default file format for Scratch projects is "exe". (×)
- 45. The interface language of the Scratch program can be changed to Arabic. (✓)
- 46. Scratch helps develop creative thinking and problem-solving skills. (✓)
- 47. The Stage Area is used to assemble building blocks. (×)
- 48. The "wait" command is used to change the speed of command execution in Scratch. (✓)
- 49. Sprites in the Scratch program appear in the Stage Area. (✓)
- 50. X coordinates represent the horizontal movement of the object on the stage. (✓)

Best of luck! ★

استفوق  
إعداد  
مستر احمد يوسف



حمل الآن

مجاناً وحصرياً

# المراجعة رقم (3)

## اختبار شهر فبراير







## Model Exam (1)

### ☐ Put ✓ Or X:-

(One point for each question)

1. Laser rangefinders are accurate because they use laser beams. ( )
2. The motors used in robots include electric motors and pneumatic motors. . ( )
3. In Scratch, the student needs to write a lot of complex codes. ( )
4. The first step in the operation of the sensor is the conversion. ( )
5. Artificial intelligence can help doctors diagnose diseases. ( )

### ☐ Complete the following sentences with suitable words from the brackets:-

(One point for each question)

1. In production lines, robots can perform repetitive tasks accurately and without any delay, which leads to.....
  - A. Increase efficiency and productivity
  - B. decreased efficiency and productivity
  - C. Lack of product development
  - D. Slow production process
2. .... Like Siri or Alexa, uses artificial intelligence to understand and execute your commands.
  - A. Personal Assistant
  - B. Interpreter
  - C. Smart shopping
  - D. Natural language
3. Sensors help robots to .....
  - A. Teach her new languages
  - B. Allowing her to interact with her environment
  - C. Increase its size
  - D. slow down its operations
4. In Scratch, the result of the work or project appears in the area of.....
  - A. Script area
  - B. Stage area
  - C. Area blocks
  - D. Sprites area
5. Robots help in dangerous tasks such as.....
  - A. Means of transportation and communication
  - B. Handling heavy weights and hazardous chemicals
  - C. Garden and park irrigation
  - D. house cleaning



## Model Exam (2)

### ☐ Put $\sqrt{\text{Or X}}$ :-

(One point for each question)

1. The design of the structure affects the weight of the robot and its ability to move ( )
2. Self-driving cars rely entirely on artificial intelligence ( )
3. Medical robots help doctors perform surgeries ( )
4. In Scratch, the Stage area displays the programming sections ( )
5. Light sensors are useful in underwater environments ( )

### ☐ Complete the following sentences with suitable words from the brackets:-

(One point for each question)

1. .... Like Siri or Alexa, uses artificial intelligence to understand and carry out your commands  
A. Personal Assistant  
B. Interpreter  
C. Smart shopping  
D. Natural language
2. Scratch uses a ..... interface based on blocks  
A. Light  
B. Visual  
C. Transparent  
D. None of the above
3. A common application of sensors is the use of infrared in....  
A. Smartphones  
B. Remote Controls  
C. Vacuum cleaners  
D. 3D scanning
4. Robots help in dangerous tasks such as.....  
A. Means of transportation and communications  
B. Handling heavy weights and hazardous chemicals  
C. Garden and park irrigation  
D. house cleaning
5. Artificial intelligence ..... can easily solve problems that are difficult for humans to solve, and discover New things we never imagined before  
A. Narrow  
B. General  
C. Super  
D. Precise





## Model Exam (3)





### ☐ Put ✓ Or X:-

(One point for each question)

1. The first step in the operation of the sensor is conversion ( )
2. Scrat is a difficult learning tool to use ( )
3. Artificial intelligence is a science of computer science ( )
4. Light sensors help cars determine the distance to other vehicles ( )
5. Artificial intelligence can help doctors diagnose diseases ( )

### ☐ Complete the following sentences with suitable words from the brackets:-

(One point for each question)

1. In Scratch, the result of the work or project appears in the area of.....
  - A. Narrow
  - B. General
  - C. Super
  - D. Precise
2. Like.....Siri or Alexa, it uses artificial intelligence to understand and carry out your .commands
  - A. Personal Assistant
  - B. Interpreter
  - C. Smart shopping
  - D. Natural language
3. Sensors help robots to .....
  - A. Teach her new languages
  - B. Allowing her to interact with her environment
  - C. Increase its size
  - D. slow down its operations
4. A common application of sensors is the use of infrared in....
  - A. Smartphones
  - B. Remote Controls
  - C. Vacuum cleaners
  - D. 3D scanning
5. To implement the project, click on the symbol.....
  - A. 
  - B. 
  - C. 
  - D. 



## Model Exam (4)

### ☐ Put ✓ Or X:-

(One point for each question)

1. Scratch is a paid program ( )
2. Robots are only used in factories ( )
3. In Scratch, the Stage area displays the programming sections ( )
4. The smart lighting system in the home uses sensors to turn on the lights automatically when someone enters the room ( )
5. Artificial intelligence can help doctors diagnose diseases ( )

### ☐ Complete the following sentences with suitable words from the brackets:-

(One point for each question)

1. Artificial intelligence ..... can easily solve problems that are difficult for humans to solve, and discover new things that we could not have imagined before.

- A. Narrow
- B. General
- C. Super
- D. Precise

2. In Scratch, the result of the work or project appears in the area of.....

- A. ScriptArea
- B. Stage
- C. Area Blocks
- D. Sprite area

3. Sensors help robots to .....

- A. Teach her new languages
- B. Allowing her to interact with her environment
- C. Increase its size
- D. slow down its operations

4. A common application of sensors is the use of infrared in....

- A. Smartphones
- B. Remote Controls
- C. Vacuum cleaners
- D. 3D scan

5. Robots help in dangerous tasks such as.....

- A. Means of transportation and communications
- B. Handling heavy weights and hazardous chemicals
- C. Garden and park irrigation
- D. house cleaning





## Model Exam (1)

### ☐ Put ✓ Or X:-

(One point for each question)

1. Laser rangefinders are accurate because they use laser beams. (✓)
2. The motors used in robots include electric motors and pneumatic motors. . (✓)
3. In Scratch, the student needs to write a lot of complex codes. (X)
4. The first step in the operation of the sensor is the conversion. (X)
5. Artificial intelligence can help doctors diagnose diseases. (✓)

### ☐ Complete the following sentences with suitable words from the brackets:-

(One point for each question)

1. In production lines, robots can perform repetitive tasks accurately and without any delay, which leads to.....
  - A. Increase efficiency and productivity
  - B. decreased efficiency and productivity
  - C. Lack of product development
  - D. Slow production process
2. .... Like Siri or Alexa, uses artificial intelligence to understand and execute your commands.
  - A. Personal Assistant
  - B. Interpreter
  - C. Smart shopping
  - D. Natural language
3. Sensors help robots to .....
  - A. Teach her new languages
  - B. Allowing her to interact with her environment
  - C. Increase its size
  - D. slow down its operations
4. In Scratch, the result of the work or project appears in the area of.....
  - A. Script area
  - B. Stage area
  - C. Area blocks
  - D. Sprites area
5. Robots help in dangerous tasks such as.....
  - A. Means of transportation and communication
  - B. Handling heavy weights and hazardous chemicals
  - C. Garden and park irrigation
  - D. house cleaning



## Model Exam (2)

### ☐ Put ✓/Or X:-

(One point for each question)

1. The design of the structure affects the weight of the robot and its ability to move (✓)
2. Self-driving cars rely entirely on artificial intelligence (✓)
3. Medical robots help doctors perform surgeries (✓)
4. In Scratch, the Stage area displays the programming sections (X)
5. Light sensors are useful in underwater environments (X)

### ☐ Complete the following sentences with suitable words from the brackets:-

(One point for each question)

1. .... Like Siri or Alexa, uses artificial intelligence to understand and carry out your commands  
A. Personal Assistant  
B. Interpreter  
C. Smart shopping  
D. Natural language
2. Scratch uses a ..... interface based on blocks  
A. Light  
B. Visual  
C. Transparent  
D. None of the above
3. A common application of sensors is the use of infrared in....  
A. Smartphones  
B. Remote Controls  
C. Vacuum cleaners  
D. 3D scanning
4. Robots help in dangerous tasks such as.....  
A. Means of transportation and communications  
B. Handling heavy weights and hazardous chemicals  
C. Garden and park irrigation  
D. house cleaning
5. Artificial intelligence ..... can easily solve problems that are difficult for humans to solve, and discover New things we never imagined before  
A. Narrow  
B. General  
C. Super  
D. Precise





Subject: ICT

Name:-----

Class:-----

## Model Exam (3)





☐ Put ☒ Or X:-

(One point for each question)

1. The first step in the operation of the sensor is conversion (X)
2. Scrat is a difficult learning tool to use (X)
3. Artificial intelligence is a science of computer science (✓)
4. Light sensors help cars determine the distance to other vehicles (✓)
5. Artificial intelligence can help doctors diagnose diseases (✓)

☐ Complete the following sentences with suitable words from the brackets:-

(One point for each question)

1. In Scratch, the result of the work or project appears in the area of.....
  - A. Script area
  - B. **Stage area**
  - C. Area blocks
  - D. Sprites area
2. .... Like Siri or Alexa, it uses artificial intelligence to understand and carry out your commands.
  - A. **Personal Assistant**
  - B. Interpreter
  - C. Smart shopping
  - D. Natural language
3. Sensors help robots to .....
  - A. Teach her new languages
  - B. **Allowing her to interact with her environment**
  - C. Increase its size
  - D. slow down its operations
4. A common application of sensors is the use of infrared in....
  - A. Smartphones
  - B. **Remote Controls**
  - C. Vacuum cleaners
  - D. 3D scanning
5. To implement the project, click on the symbol.....
  - A. 
  - B. 
  - C. 
  - D. 



## Model Exam (4)

### ☐ Put $\sqrt$ Or X:-

(One point for each question)

1. Scratch is a paid program (X)
2. Robots are only used in factories (X)
3. In Scratch, the Stage area displays the programming sections (X)
4. The smart lighting system in the home uses sensors to turn on the lights automatically when someone enters the room ( $\sqrt$ )
5. Artificial intelligence can help doctors diagnose diseases ( $\sqrt$ )

### ☐ Complete the following sentences with suitable words from the brackets:-

(One point for each question)

1. Artificial intelligence ..... can easily solve problems that are difficult for humans to solve, and discover new things that we could not have imagined before.

- A. Narrow
- B. General
- C. Super
- D. Precise

2. In Scratch, the result of the work or project appears in the area of.....

- A. ScriptArea
- B. Stage
- C. Area Blocks
- D. Sprite area

3. Sensors help robots to .....

- A. Teach her new languages
- B. Allowing her to interact with her environment
- C. Increase its size
- D. slow down its operations

4. A common application of sensors is the use of infrared in....

- A. Smartphones
- B. Remote Controls
- C. Vacuum cleaners
- D. 3D scan

5. Robots help in dangerous tasks such as.....

- A. Means of transportation and communications
- B. Handling heavy weights and hazardous chemicals
- C. Garden and park irrigation
- D. house cleaning



حمل الآن

مجاناً وحصرياً

# المراجعة رقم (4)

## اختبار شهر فبراير



## Q1: Choose the correct answer from a, b, c, or d.

1. .... is a type of artificial intelligence that focuses on one specific task.
  - a. General AI
  - b. Super AI
  - c. Personal AI
  - d. Narrow AI
2. .... use artificial intelligence to make the game more fun and challenging.
  - a. Smart cars
  - b. Smart games
  - c. Digital numbers
  - d. Instant translator
3. Which of the following is an application of AI in daily life?
  - a. Writing with a pen
  - b. Traditional cars
  - c. Smart cars
  - d. All of them
4. .... is one of the roles performed by personal assistants like Siri and Alexa.
  - a. Performing surgeries
  - b. Understanding our commands
  - c. Creating computer programs
  - d. Teaching languages
5. "....." is the main goal of deep learning.
  - a. Performing specific tasks without learning
  - b. Simulating human learning through neural networks
  - c. Performing only mathematical calculations
  - d. Translating written texts





6. Machine learning helps to .....
  - a. reducing the system's ability to adapt
  - b. enabling systems to learn from data and improve their performance
  - c. interacting with sound only
  - d. operating robots only
7. .... is used in instant translation.
  - a. Natural Language Processing
  - b. Computer Vision
  - c. Expert Systems
  - d. Deep Learning only
8. **Sensors are .....**
  - a. devices used to decorate robots.
  - b. devices that sense changes in the environment and convert them into signals.
  - c. devices used to operate electrical appliances.
  - d. devices used to store data.
9. In robots, sensors help to .....
  - a. powering robots
  - b. give robots mobility
  - c. enable robots to understand and interact with their environment
  - d. store information collected by the robot
10. .... **is not an example of a sensor.**
  - a. Temperature sensor
  - b. Light sensor
  - c. Electric motor
  - d. Sound sensor
11. .... **is the first step in the work of the sensor.**
  - a. Sending signals to another device
  - b. Converting signals into electrical signals
  - c. Making a decision based on the sensed information
  - d. Sensing changes in the environment



12. **Ultrasonic sensors are used in vacuum cleaner robots for .....**

- a. determining the color of objects
- b. measuring room temperature
- c. determining the distance between the robot and obstacles
- d. controlling the suction power

13. **The main function of the sensor is .....**

- a. store data
- b. capture environmental changes and convert them into signals
- c. display images
- d. produce sound

14. **Sensors help robots to .....**

- a. teach them new languages
- b. allow them to interact with their environment
- c. increase their size
- d. slow down their operations

15. **..... is a type of sensor used to avoid obstacles.**

- a. Light sensors
- b. Sound sensors
- c. Distance sensors
- d. Heat sensors

16. **The first step in the operation of the sensor is .....**

- a. Transmission
- b. displaying
- c. sensing
- d. signal conversion





17. .... are commonly used in remote controls.
- a. Ultrasonic sensors
  - b. Infrared sensors
  - c. Light sensors
  - d. Motion sensors
18. **Laser rangefinders are accurate because they use .....**
- a. sound waves
  - b. visible light
  - c. high frequency waves
  - d. laser beams
19. **A common application of sensors is the use of infrared in .....**
- a. smartphones
  - b. vacuum cleaners
  - c. 3D scanning
  - d. motion detection
20. **In which environment are light sensors useful?**
- a. In dark rooms
  - b. In places with variable lighting conditions
  - c. In underwater environments
  - d. In noisy factories
21. **One of the sensors that are used to measure distance using high frequency sound waves is .....**
- a. ultrasonic sensors
  - b. laser rangefinders
  - c. infrared sensors
  - d. motion sensors



22. .... sensors are used to turn on lights when someone enters the room.
- Smartphone
  - Smart car
  - Smart Home Lighting System
  - Smart watch
23. .... is used for non-contact temperature measurement.
- Ultrasonic sensor
  - Infrared sensor
  - Light sensor
  - Motion sensor
24. .... is the main purpose of the signal conversion step in sensors.
- Display the results
  - Send the signals to another device
  - Convert the information into electrical signals
  - Turn off the sensor
25. .... helps cars determine the distance to other vehicles.
- Sound sensors
  - Light sensors
  - Infrared sensors
  - Distance sensors
26. .... is the practical use of motion sensors in games.
- Change the volume
  - Adjust the brightness of the screen
  - Track the movements of players
  - Improve the sound quality
27. Factors that determine the choice of a sensor for a particular application .....
- Brand of the device
  - Color of the device
  - Environment and required accuracy
  - Size of the device





28. .... include algorithms that determine how the robot responds to information it receives from sensors.
- Structures
  - Software
  - Engines
  - Communication tools
29. Communication tools include .....
- Bluetooth
  - Wi-Fi
  - both a & b
  - none of them
30. .... are components of the robot.
- Structure
  - Software
  - Motors
  - All of them
31. One of the areas of use of robots in ..... is to provide interactive experiences for students.
- industry
  - health care
  - education
  - agriculture
32. The challenges of robotics technology are .....
- security
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  - ethics
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33. The challenges facing robotics technology include .....
- Increased reliance on paper documents.
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  - Increased reliance on traditional machines.



34. **In production lines, robots can perform repetitive tasks accurately and without any delay, which leads to .....**
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  - b. Teaching the basics of programming in a visual and fun way
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  - b. Requires complex coding
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39. **..... is the primary function of blocks in Scratch.**
- a. File management
  - b. Organizing code
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40. **The Scratch program can be downloaded from .....**
- a. Paid App Store
  - b. The official website of the program
  - c. Email
  - d. A CD-ROM
41. **..... is an area used to assemble building blocks in Scratch.**
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  - b. Script Area
  - c. Menu bar
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43. **The Scratch program's interface language can be changed using .....**
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## Q2: Put (✓) or (X) for the following sentences.

- 1- An AI model can be trained using images directly from the camera. ( )
- 2- Machine learning enables AI to learn from mistakes and improve performance. ( )
- 3- Smart robots cannot work in environments that are dangerous to humans. ( )
- 4- General artificial intelligence is able to learn and adapt to new situations like humans. ( )
- 5- Artificial intelligence can be used in analyzing data to improve online shopping. ( )
- 6- Super AI focuses on one task. ( )
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- 10- Self-driving cars depend entirely on artificial intelligence. ( )
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- 12- Artificial intelligence is a science of computer science. ( )
- 13- For artificial intelligence to become intelligent, it needs small amounts of information. ( )
- 14- Artificial intelligence is only one type. ( )
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- 16- General artificial intelligence is more advanced. ( )
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- 22- Natural Language Processing is like a machine language translator. ( )
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- 24- Light sensors measure the distance between the robot and the obstacles around it. ( )
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- 26- A self-driving car is an example of an electronic device in which sensors are used. ( )
- 27- Ultrasonic sensors emit low-frequency sound waves and then receive the return waves after bouncing off an object. ( )
- 28- Vacuum cleaner robots use sensors to locate furniture without colliding. ( )
- 29- A robot is a device that cannot be programmed to perform tasks automatically. ( )
- 30- Medical robots are used in schools to teach students how to code. ( )
- 31- The structure is the main part that holds all the components of the robot. ( )
- 32- Sensors are the senses of the robot. ( )
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- 34- The software is what makes the robot smart. ( )
- 35- Robots use communication tools to interact with users. ( )
- 36- The vacuum cleaner has sensors to avoid collisions with furniture. ( )
- 37- Robots cannot perform precise surgeries. ( )
- 38- Care and health are areas of robot use. ( )
- 39- Robots work is limited to factories only. ( )
- 40- Medical robots help doctors perform surgeries. ( )
- 41- The design of the structure affects the weight of the robot and its ability to move. ( )
- 42- Vision sensors are used to capture sounds. ( )
- 43- The motors used in robots include electric motors and air motors. ( )



- 44- The control unit processes the data collected by the sensors and issues commands to the motors. ( )
- 45- Robots rely on direct energy sources only and we cannot use batteries or solar cells. ( )
- 46- Robots do not need to use software in their work. ( )
- 47- Robots use communication tools to interact with users or other robots. ( )
- 48- The areas of use of robots include industry, healthcare, and education. ( )
- 49- The "wait" command is used to change the speed of command execution in Scratch. ( )
- 50- Sprites in the Scratch program appear in the Stage Area. ( )
- 51- X coordinates represent the horizontal movement of the object on the stage. ( )
- 52- The default file format for Scratch projects is ".exe". ( )
- 53- The interface language of the Scratch program can be changed to Arabic. ( )
- 54- Scratch helps develop creative thinking and problem-solving skills. ( )
- 55- The Stage area is used to assemble building blocks. ( )
- 56- The Scratch program provides a very wide range of ideas that can be programmed. ( )
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- 61- The Scratch program is paid. ( )
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- 63- In the Scratch program, the Stage area shows the programming sections. ( )



- 64- In the Scratch program, the result of the work or project appears in the Area Blocks area. ( )
- 65- To implement the project, click on the symbol.  ( )

### Q3: Complete the following sentences

A- (Computer Vision - General AI - Natural Language Processing - Teachable Machine - Machine Learning)

1. .... is a type of artificial intelligence that can perform all tasks a human can do.
2. The ability of devices to understand written and spoken human language is ..... using artificial intelligence.
3. .... is a website used to create smart models for classifying images, sounds, and movements.
4. The technology that helps artificial intelligence recognize and analyze images is .....
5. A technology that makes artificial intelligence learn from mistakes to improve its performance is .....

B- (Sensors - Signal conversion - Sensor - Ultrasonic sensor - Distance Sensor)

1. A device that translates sensations such as heat, light, and sound into a language that a computer understands is .....
2. A type of device that uses sound waves to measure the distance to objects is .....
3. The process through which a sensor converts sensing information into electrical signals is the ..... step.
4. .... are considered the eyes and ears of machines.
5. .... measure the distance between the robot and surrounding obstacles





**c- (Motors - controller - software - robot - Educational)**

1. A ..... is a device that can be programmed to perform a set of specific tasks automatically.
2. .... robots are used in schools to teach students.
3. .... are used to move parts of a robot.
4. The ..... is the brain of the robot.

**D-(Command Block - Stage Area - Control Block - Script Area - Sb3)**

1. An area in the Scratch program where the blocks are assembled to form is called .....
2. The area in the Scratch program where the results of a project or action are shown is called .....
3. .... is the tool in Scratch that is used to delay the execution of commands for a specified period of time.
4. .... is the default file format (extension) in which a Scratch project is saved.
5. A set of code commands arranged in a specific order to perform specific tasks in a Scratch program is called .....



## Q1: Choose the correct answer from a, b, c, or d.

1. .... is a type of artificial intelligence that focuses on one specific task.
  - a. General AI
  - b. Super AI
  - c. Personal AI
  - d. **Narrow AI**
2. .... use artificial intelligence to make the game more fun and challenging.
  - a. Smart cars
  - b. **Smart games**
  - c. Digital numbers
  - d. Instant translator
3. Which of the following is an application of AI in daily life?
  - a. Writing with a pen
  - b. Traditional cars
  - c. **Smart cars**
  - d. All of them
4. .... is one of the roles performed by personal assistants like Siri and Alexa.
  - a. Performing surgeries
  - b. **Understanding our commands**
  - c. Creating computer programs
  - d. Teaching languages
5. "....." is the main goal of deep learning.
  - a. Performing specific tasks without learning
  - b. **Simulating human learning through neural networks**
  - c. Performing only mathematical calculations
  - d. Translating written texts



6. Machine learning helps to .....  
a. reducing the system's ability to adapt  
b. enabling systems to learn from data and improve their performance  
c. interacting with sound only  
d. operating robots only
7. .... is used in instant translation.  
a. Natural Language Processing  
b. Computer Vision  
c. Expert Systems  
d. Deep Learning only
8. **Sensors are** .....  
a. devices used to decorate robots.  
b. devices that sense changes in the environment and convert them into signals.  
c. devices used to operate electrical appliances.  
d. devices used to store data.
9. In robots, sensors help to .....  
a. powering robots  
b. give robots mobility  
c. enable robots to understand and interact with their environment  
d. store information collected by the robot
10. .... is not an example of a sensor.  
a. Temperature sensor  
b. Light sensor  
c. Electric motor  
d. Sound sensor
11. .... is the first step in the work of the sensor.  
a. Sending signals to another device  
b. Converting signals into electrical signals  
c. Making a decision based on the sensed information  
d. Sensing changes in the environment





12. **Ultrasonic sensors are used in vacuum cleaner robots for .....**

- a. determining the color of objects
- b. measuring room temperature
- c. **determining the distance between the robot and obstacles**
- d. controlling the suction power

13. **The main function of the sensor is .....**

- a. store data
- b. **capture environmental changes and convert them into signals**
- c. display images
- d. produce sound

14. **Sensors help robots to .....**

- a. teach them new languages
- b. **allow them to interact with their environment**
- c. increase their size
- d. slow down their operations

15. **..... is a type of sensor used to avoid obstacles.**

- a. Light sensors
- b. Sound sensors
- c. **Distance sensors**
- d. Heat sensors

16. **The first step in the operation of the sensor is .....**

- a. Transmission
- b. displaying
- c. **sensing**
- d. signal conversion



17. .... are commonly used in remote controls.

- a. Ultrasonic sensors
- b. Infrared sensors
- c. Light sensors
- d. Motion sensors

18. Laser rangefinders are accurate because they use

.....

- a. sound waves
- b. visible light
- c. high frequency waves
- d. laser beams

19. A common application of sensors is the use of infrared in

.....

- a. Remote controls
- b. vacuum cleaners
- c. 3D scanning
- d. motion detection

20. In which environment are light sensors useful?

- a. In dark rooms
- b. In places with variable lighting conditions
- c. In underwater environments
- d. In noisy factories

21. One of the sensors that are used to measure distance using high frequency sound waves is .....

- a. ultrasonic sensors
- b. laser rangefinders
- c. infrared sensors
- d. motion sensors



22. .... sensors are used to turn on lights when someone enters the room.
- Smartphone
  - Smart car
  - Smart Home Lighting System
  - Smart watch
23. .... is used for non-contact temperature measurement.
- Ultrasonic sensor
  - Infrared sensor
  - Light sensor
  - Motion sensor
24. .... is the main purpose of the signal conversion step in sensors.
- Display the results
  - Send the signals to another device
  - Convert the information into electrical signals
  - Turn off the sensor
25. .... helps cars determine the distance to other vehicles.
- Sound sensors
  - Light sensors
  - Infrared sensors
  - Distance sensors
26. .... is the practical use of motion sensors in games.
- Change the volume
  - Adjust the brightness of the screen
  - Track the movements of players
  - Improve the sound quality
27. Factors that determine the choice of a sensor for a particular application .....
- Brand of the device
  - Color of the device
  - Environment and required accuracy
  - Size of the device





28. .... include algorithms that determine how the robot responds to information it receives from sensors.
- a. Structures
  - b. **Software**
  - c. Engines
  - d. Communication tools
29. **Communication tools include .....**
- a. Bluetooth
  - b. Wi-Fi
  - c. **both a & b**
  - d. none of them
30. .... are components of the robot.
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  - b. Software
  - c. Motors
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## Q2: Put (✓) or (X) for the following sentences.

- 1- An AI model can be trained using images directly from the camera. ( T )
- 2- Machine learning enables AI to learn from mistakes and improve performance. ( T )
- 3- Smart robots cannot work in environments that are dangerous to humans. ( F )
- 4- General artificial intelligence is able to learn and adapt to new situations like humans. ( T )
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- 62- In the Scratch program, students face difficulty in sharing projects with others. ( F)





- 63- In the Scratch program, the Stage area shows the programming sections. ( F )
- 64- In the Scratch program, the result of the work or project appears in the Area Blocks area. ( F )
- 65- To implement the project, click on the symbol.  ( T )

### Q3: Complete the following sentences

A- (Computer Vision - General AI - Natural Language Processing - Teachable Machine - Machine Learning)

1. **...General AI.....** is a type of artificial intelligence that can perform all tasks a human can do.
2. The ability of devices to understand written and spoken human language is **...Natural language processing.....** using artificial intelligence.
3. **.....teachable machine.....** is a website used to create smart models for classifying images, sounds, and movements.
4. The technology that helps artificial intelligence recognize and analyze images is **...Computer vision.....**
5. A technology that makes artificial intelligence learn from mistakes to improve its performance is **.....Machine learning.....**

B- (Sensors - Signal conversion - Sensor - Ultrasonic sensor - Distance Sensor)

1. A device that translates sensations such as heat, light, and sound into a language that a computer understands is **.....Sensor.....**
2. A type of device that uses sound waves to measure the distance to objects is **.....Ultrasonic sensor.....**
3. The process through which a sensor converts sensing information into electrical signals is the **.....signal conversion.....** step.
4. **...Sensors.....** are considered the eyes and ears of machines.
5. **.....Distance sensor.....** measure the distance between the robot and surrounding obstacles



c- (**Motors - controller - software - robot - Educational**)

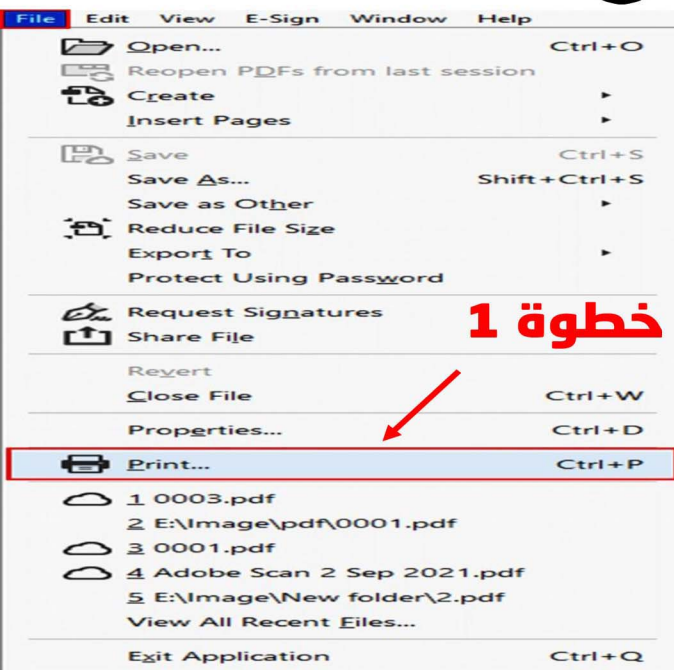
1. A **.....Robot.....** is a device that can be programmed to perform a set of specific tasks automatically.
2. **.....Educational.....** robots are used in schools to teach students.
3. **....Motors.....** are used to move parts of a robot.
4. The **....Controller.....** is the brain of the robot.

D- (**Command Block - Stage Area - Control Block - Script Area - Sb3**)

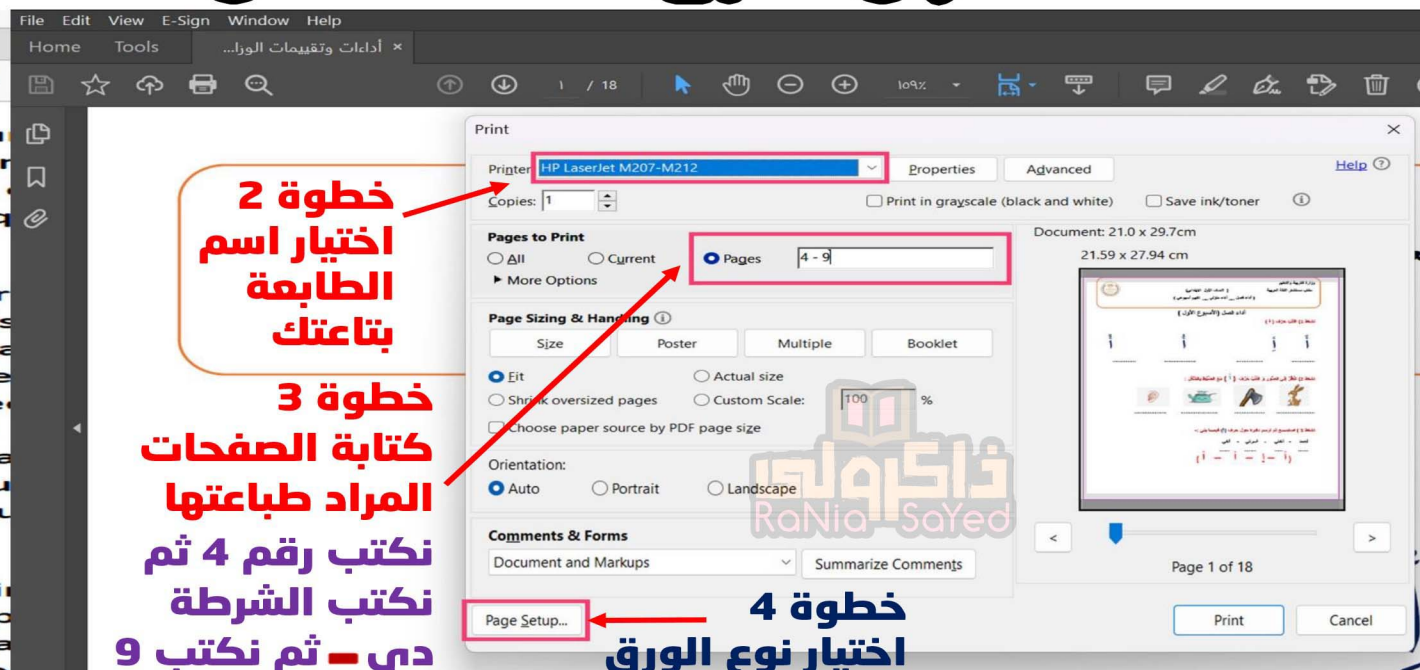
1. An area in the Scratch program where the blocks are assembled to form is called **...Script area.....**
2. The area in the Scratch program where the results of a project or action are shown is called **....Stage area.....**
3. **....Control block.....** is the tool in Scratch that is used to delay the execution of commands for a specified period of time.
4. **.....sb3.....** is the default file format (extension) in which a Scratch project is saved.
5. A set of code commands arranged in a specific order to perform specific tasks in a Scratch program is called **.....Command block.....**



# كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



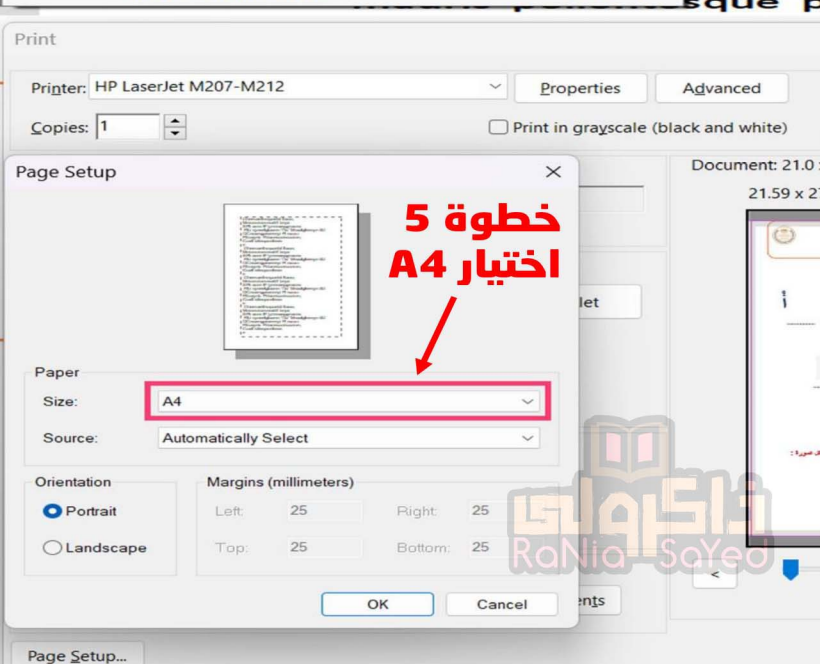
خطوة 1



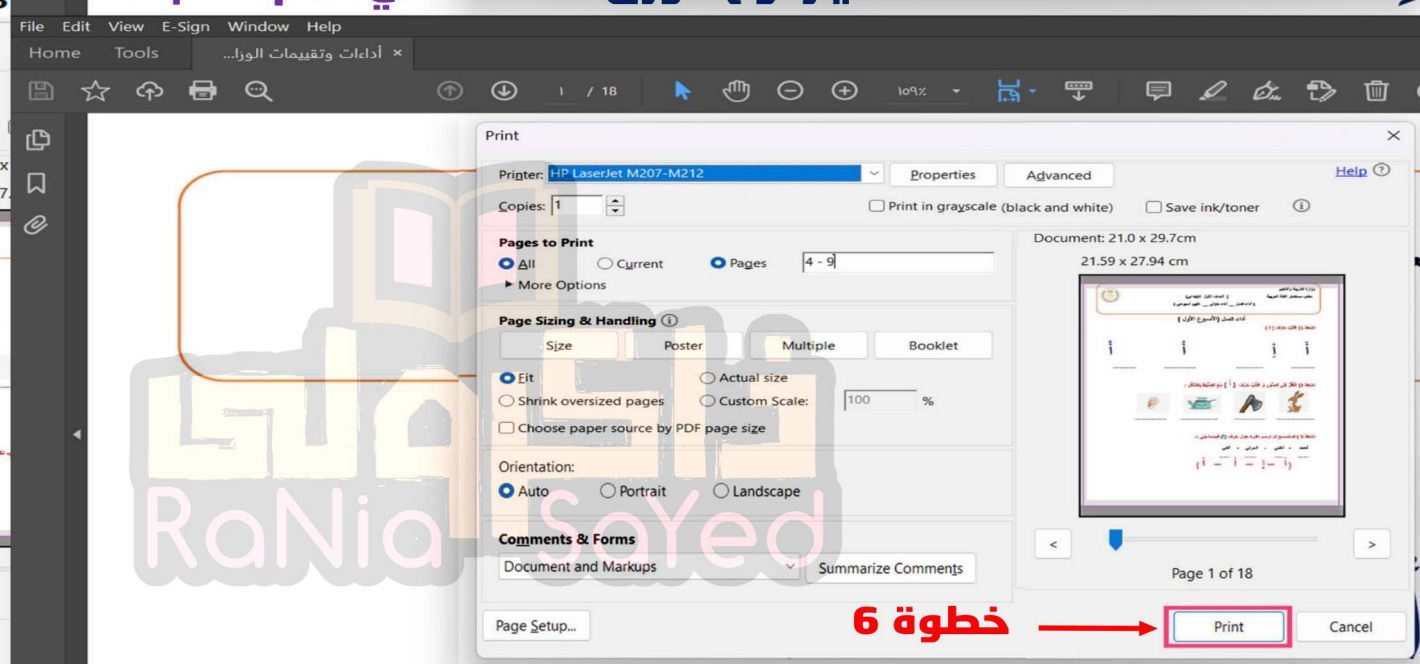
خطوة 2  
اختيار اسم  
الطابعة  
بتاعتك

خطوة 3  
كتابة الصفحات  
المراد طباعتها  
نكتب رقم 4 ثم  
نكتب الشرطة  
دي - ثم نكتب 9

خطوة 4  
اختيار نوع الورق



خطوة 5  
اختيار A4



خطوة 6